



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Re: Appeal to the Board of Patent Appeals and Interferences

DM-10/2003
3620

In re Application of: Tong Sun, et al.

Group Art Unit: 3629

Serial No.: 10/022,823

Examiner: Cole, Elizabeth M.

Filed: December 18, 2001

Our Customer ID: 22827

For: Polyvinylamine Treatments to Improve
Dyeing of Cellulosic Materials

Our Account No.: 04-1403

Sir:

Attorney Ref.: KCX-436B (16659.B)

1. ☐ **NOTICE OF APPEAL:** Pursuant to 37 CFR 41.31, Applicant hereby appeals to the Board of Appeals from the decision dated ____ of the Examiner twice/finally rejecting claims ____.
2. ☐ **BRIEF** on appeal in this application pursuant to 37 CFR 41.37 is transmitted herewith (1 copy)
3. ☐ An **ORAL HEARING** is respectfully requested under 37 CFR 41.47 (due within one month after Examiner's Answer).
4. ☒ Reply Brief under 37 CFR 41.41(b) is transmitted herewith (1 copy).
5. ☐ "Small entity" verified statement filed: ☐ herewith ☐ previously.

6. **FEE CALCULATION:**

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Petition is hereby made to extend the original due date of _____ to cover the date of this paper and any enclosure for which the requisite fee is (1 month \$120); (2 months \$450); (3 months \$1,020); (4 months \$1,590); (5 months \$2,160)

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TOTAL FEE \$ -0-

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- ☐ Fee NOT required since paid in prior appeal in which the Board of Appeals did not render a decision on the merits.

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DORITY & MANNING, ATTORNEYS AT LAW, P.A.

By: Timothy A. Cassidy Reg. No.: 38,024
Signature: [Signature]
Date: June 27, 2005

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Katrina Morris

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ATTORNEY DOCKET NO.: KCX-436B (K-C 16659.B)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES**

In re Application of: Tong Sun, et al.)	Examiner: Elizabeth M. Cole
)	
Serial No.: 10/022,823)	Group Art Unit: 3629
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Filed: December 18, 2001)	Our Customer ID: 22827
)	
Confirmation No.: 3789)	Our Account No.: 04-1403
)	
For: Polyvinylamine Treatments To Improve)	
Dyeing Of Cellulosic Materials)	

REPLY BRIEF

Honorable Commissioner for Patents
U.S. Patent and Trademark Office
Post Office Box 1450
Alexandria, VA 22313-1450

Honorable Commissioner:

Appellants submit the following reply brief in accordance with 37 C.F.R. § 41.37:

1. REAL PARTY IN INTEREST:

The real party in interest in this matter is the assignee of record, Kimberly-Clark
Worldwide, Inc.

2. RELATED APPEALS AND INTERFERENCES:

There are no other appeals or interferences known to the Appellants or the
Appellants' legal representative which will directly affect or be directly affected by or
have a bearing on the Board's decision in the pending appeal.

3. STATUS OF CLAIMS:

Claims 16-28 and 32 are currently pending in the present application, including independent claim 16. All the claims are attached hereto as Exhibit A.

4. STATUS OF AMENDMENTS:

The Appellants' Request For Reconsideration filed on September 24, 2004, was not entered into the record. However, no amendments were made in the Request For Reconsideration.

5. SUMMARY OF CLAIMED SUBJECT MATTER:

The currently pending claims are directed to a dyed textile material that has been treated with a polyvinylamine and a complexing agent. As stated in the specification, the present inventors have discovered that the combination of the polyvinylamine polymer and the complexing agent, when applied to the textile material can increase the affinity of the material for various dyes, particularly acid dyes. Application, Page 5, ll. 1-10. The complexing agent can be a polymeric anionic reactive compound, a polymeric aldehyde functional compound, a glyoxylated polyacrylamide, an anionic surfactant, or mixtures thereof. Application, Page 4, ll. 14-20.

For instance, independent claim 16 is directed to a dyed textile material containing a cellulosic material. The cellulosic material has been treated with a polyvinylamine and a complexing agent. The complexing agent serves to bond the polyvinylamine to the cellulosic material. As defined in claim 16, the dyed textile material further comprises an acid dye applied to the cellulosic material.

6. GROUND OF REJECTION TO BE REVIEWED ON APPEAL:

In the Final Office Action dated June 22, 2004, the Examiner provisionally rejected claims 16-18 and 32 under the judicially created Doctrine of Obviousness-Type Double Patenting as being unpatentable over claims 1-45 of the pending Application No. 10/023,489.

Also, in the Final Office Action, the Examiner rejected claims 16-18, 20-23, 26-28 and 32 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,529,585 issued to Schrell, et al. (hereinafter "Schrell") in view of U.S. Patent No. 4,242,408 issued to Evani (hereinafter "Evani").

Claims 24-25 were rejected under 35 U.S.C. § 103 as being unpatentable over Schrell in view of Evani and further in view of JP 02-127,593 (hereinafter JP '593).

Claims 16-17, 19-20, 22-23, 26-28, and 32 were rejected under 35 U.S.C. § 103 as being unpatentable over Schrell in view of WO 00/11046 issued to Geer, et al. (hereinafter "Geer").

Claims 24-25 were rejected under 35 U.S.C. § 103 as being unpatentable over Schrell in view of Geer and in further view of JP '593.

7. REPLY TO EXAMINER'S BRIEF:

In the Examiner's Answer, particularly the Response to Argument section, the Examiner continues to argue that it would have been obvious to include the complexing agents described by either Evani or Geer in the fibrous material disclosed by Schrell.

The Examiner again fails to sufficiently address the claim limitation requiring the complexing agent serving to bond the polyvinylamine to the cellulosic material. The

Examiner merely states that it would have been expected that the complexing agents described in Evani or Geer would function in the same way if they were also included in the fiber solution. However, there is no teaching or suggestion that this result would in fact result in the bonding of the polymeric amine to the cellulosic fibers in any of the cited references. It appears that the Examiner continues to rely on the present application, through impermissible hindsight analysis, to find support that the complexing agent serves to bond the polyvinylamine to the cellulosic material.

Applicants reiterate that no motivation, suggestion, or incentive exists to modify the disclosure of Schrell with the teaching of either Evani or Geer. Specifically, one of ordinary skill in the art, upon reading Schrell, would not be motivated to employ the use of an additional compound, such as a complexing agent, to bond the polyvinylamine to the cellulosic material, as required by claim 16. The polymeric amine compound of Schrell becomes incorporated into the regenerated cellulose fibers by being added during the formation of the fibers. There is no motivational suggestion within Schrell to lead one of ordinary skill in the art to look for a compound serving to further bond the polymeric amine compound of Schrell to the cellulose fibers.

Furthermore, even if one of ordinary skill in the art would add the strength binder of either Evani or Geer, absent any motivation or suggestion to do so, this addition may not result in the bonding of the polymeric amine and the cellosic fibers. According to Schrell, the polymeric amine is added to the cellulosic solution prior to the spinning of the fibers. Then, the viscose solution containing both the cellulose and the polymeric amine is spun into fibers directly from the solution. See, i.e., Col. 3, rows 1-9. Then,

the fibers containing both the polymeric amine and the cellulose material can be formed into the final product, such as woven fabrics, knitted fabrics, or nonwovens.

According to Evani, the strength bonder is added to the web, after the web has been formed. As such, Applicants respectfully submit that the cellulose fibers may not bond to the polymeric amines, since both are already formed into the web. Thus, the combination of Schrell and Evani, even if combined without any motivation, would not necessarily provide all of the limitations of the pending claims. Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

On the other hand, the presently pending claims require the use of a complexing agent, in addition to the polyvinylamine and the cellulosic material. The complexing agent serves to bond the polyvinylamine to the cellulosic material. According to the present specification, and not wishing to be bound by theory, it is believed that a complexing agent once contacting a cellulose fiber will bind to the fiber. Once the complexing agent is bound to the fiber, it is believed that the complexing agent can facilitate the formation of a covalent bond between the polyvinylamine and the fiber. The polyvinylamine provides dye sites for the acid dye. Application, Pgs. 41-42, ll. 25-2.

Furthermore, no motivation exists, upon reading the disclosure of Schrell, to further look for another additive, such as the strength binders disclosed by Evani and Geer (or even further to the additives of JP '593). The Examiner seemingly ignored, and failed to address, the fact that the entire disclosure of Schrell is directed to improving the dying characteristics and enhancing the fiber strength without "agents for pretreating the surface of the cellulose fiber textiles before dyeing."

The Examiner's Answer Brief fails to address that Schrell specifically and expressly teaches away from any other additives to the fibers. As such, the incorporation of the complexing agent, as required in the present claims, is actually contrary to the disclosure and teaching of Schrell. Thus, one of ordinary skill in the art would not have any motivation or incentive to look to Evani or Geer for the incorporation of an additional strength agent, as suggested by the Examiner.

None of the cited references teach or even suggest that the complexing agent of the presently pending claims would serve to bond the polyvinylamine to the cellulosic fibers. As such, Applicants submit that the advantages and benefits of the presently claimed invention cannot be realized through study of the cited references, either alone or in any combination. Further, it is clearly apparent that only with Applicants' specification could the structure of claim 16 be attained, and any attempt to arrive at the structure of claim 16 through study of the cited references is only reachable from improper hindsight analysis after viewing Applicants' specification.

8. CONCLUSION:

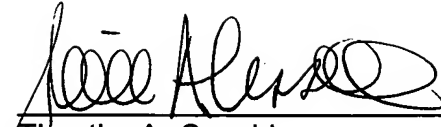
It is respectfully submitted that the claims are patentably distinct over the prior art of record and that the present application is in complete condition for allowance. As such, Appellants respectfully request issuance of the patent.

Respectfully submitted,

DORITY & MANNING,
ATTORNEYS AT LAW, P.A.

Date

4/27/05


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CLAIMS APPENDIX A

In accordance with 37 C.F.R. §1.121, the claim listing below includes the status and text of all claims.

1 – 15 (Cancelled)

16. (Original) A dyed textile material comprising:

a textile material containing a cellulosic material, said cellulosic material being treated with a polyvinylamine and a complexing agent, the complexing agent serving to bond the polyvinylamine to the cellulosic material; and
an acid dye applied to said cellulosic material.

17. (Original) A dyed textile material as defined in claim 16, further comprising an anionic polysiloxane, said anionic polysiloxane being bonded to said polyvinylamine.

18. (Original) A dyed textile material as defined in claim 16, wherein the complexing agent comprises a polymeric anionic reactive compound.

19. (Original) A dyed textile material as defined in claim 16, wherein the complexing agent comprises a polymeric aldehyde functional compound.

20. (Original) A dyed textile material as defined in claim 16, wherein the polyvinylamine comprises a partially hydrolyzed polyvinylformamide.

21. (Original) A dyed textile material as defined in claim 18, wherein the complexing agent comprises a polymer of a maleic anhydride or a maleic acid.

22. (Original) A dyed textile material as defined in claim 16, wherein the cellulosic material contains from about 0.5% to about 10% by weight polyvinylamine.

23. (Original) A dyed textile material as defined in claim 16, wherein the textile material is a fabric.

24. (Original) A dyed textile material as defined in claim 23, wherein the cellulosic material comprises cellulosic fibers, the textile material containing the cellulosic fibers in combination with nitrogen containing natural or synthetic fibers.

25. (Original) A dyed textile material as defined in claim 24, wherein the nitrogen containing natural or synthetic fibers comprise wool fibers or polyamide fibers.

26. (Original) A dyed textile material as defined claim 16, wherein the acid dye is an acid mordant dye.

27. (Original) A dyed textile material as defined in claim 26, wherein the mordant dye is a chrome mordant dye.

28. (Original) A dyed textile material as defined in claim 16, wherein the textile material is a yarn.

29. (Withdrawn) A dyed textile material as defined in claim 16, wherein the cellulosic material comprises cotton fibers.

30. (Withdrawn) A dyed textile material as defined in claim 16, wherein the cellulosic material comprises pulp fibers.

31. (Withdrawn) A dyed textile material as defined in claim 16, wherein the cellulosic material comprises rayon fibers.

32. (Original) A dyed textile material as defined in claim 16, wherein the textile material is a fabric and wherein the polyvinylamine is applied to the fabric according to a particular pattern.